In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Previously presented) A system of automated sorter operation for held or banked wafer lots, comprising:

a storage device capable of storing information regarding a current status of a wafer lot, the current status indicating the wafer lot is on hold, in production bank, or in non-production bank; and

a sorting module detecting the current status of the wafer lot from the storage device, issuing at least one first status setting instructions according to the current status of the wafer lot to a manufacturing execution system (MES) to release the wafer lot, issuing a flow instruction with sorting recipes directing the MES to perform a sorter operation after issuing the at least one first status setting instruction, and issuing at least one second status setting instructions according to the current status of the wafer lot to the MES to hold or bank the wafer lot again after completing the sorting operation,

wherein the at least one second status setting instruction describes a reverse procedure of a status change procedure described by the at least one first status setting instruction, and the wafer lot cannot be processed when the wafer lot is on hold in production bank, or in non-production bank.

2. (Previously presented) The system of claim 1 wherein the sorting module stores the current status in a temporary file or table, issues the second status setting instruction according to the current status of the wafer lot in the temporary file or table, and removes the temporary file or table after the sorter operation.

3. (Cancelled).

4. (Previously presented) The system of claim 1 wherein the MES releases or holds/banks the wafer lot based on the first status setting instruction or instructions, or the at least one second status setting instruction respectively.

5. (Previously presented) The system of claim 1 further comprising a wafer sorter performing sorter operations according to the sorting recipes.

6. (Original) The system of claim 5 further comprising a transport system transporting the wafer lot to the wafer sorter.

7. (Previously presented) The system of claim 6 wherein the MES applies a tool dispatch rule to determine the wafer sorter as a destination for the wafer lot, start the transport system to transfer the wafer lot to the wafer sorter, and direct the wafer sorter to perform the sorter operation using automated instructions.

8. (Original) The system of claim 1 wherein the sorter operation is slot mapping, carrier exchange, wafer lot combination or splits.

9-24. (Canceled)

25. (Previously presented) The system of claim 1 wherein, when the storage device stores information indicating the wafer lot is on hold, the sorting module issues the first status setting instruction to set the current status of the wafer lot to “hold release”, and issues the second status setting instruction to set the current status of the wafer lot to “hold lot”.

26. (Previously presented) The system of claim 25 wherein the wafer lot is on hold when the wafer lot is held for inspection between a start operation and an end operation during fabrication.

27. (Previously presented) The system of claim 1 wherein, when the storage device stores information indicating the wafer lot is on production bank, the sorting module issues the first status setting instructions to sequentially set the current status of the wafer lot to “hold release” and “bank move/bank in cancel”, and issues the second status setting instructions to sequentially set the current status of the wafer lot to “bank move/bank in” and “hold lot”.

28. (Previously presented) The system of claim 27 wherein the wafer lot is in production bank when the wafer lot is banked due to quality issue after an end operation completing fabrication.

29. (Previously presented) The system of claim 1 wherein, when the storage device stores information indicating the wafer lot is on non-production bank, the sorting module issues the first status setting instructions to sequentially set the current status of the wafer lot to “hold release” and “non-production bank out”, and issues the second status setting instructions to sequentially set the current status of the wafer lot to “non-production bank in” and “hold lot”.

30. (Previously presented) The system of claim 29 wherein the wafer lot is in production bank when the wafer lot is banked due to quality issue between a start operation and an end operation during fabrication.